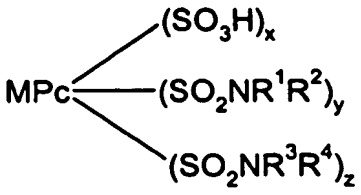
CLAIMS

1. A composition comprising:

(a) a major dye component which is a mixture of phthalocyanine dyes of Formula (1) and salts thereof:

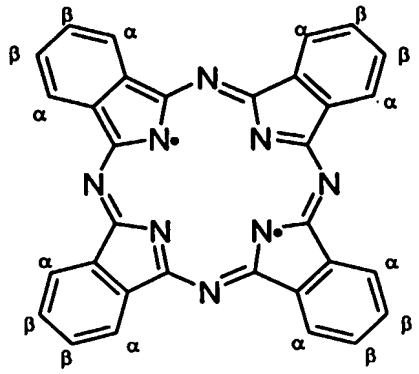


Formula (1)

wherein:

M is Cu or Ni;

Pc represents a phthalocyanine nucleus of formula;



R^1 and R^2 independently are H or optionally substituted C_{1-4}alkyl;

R^3 is H or optionally substituted hydrocarbyl; and

R^4 is optionally substituted hydrocarbyl; or

R^3 and R^4 together with the nitrogen atom to which they are attached represent an optionally substituted aliphatic or aromatic ring system;

x is 0.1 to 3.8;

y is 0.1 to 3.8;

z is 0.1 to 3.8;

the sum of (x+y+z) is 4; and

the substituents, represented by x, y and z, are attached only to a β-position on the phthalocyanine ring; and

(b) a liquid medium which comprises water and an organic solvent or an organic solvent free from water.

2. A composition according to claim 1 wherein M is Cu.

3. A composition according to either claim 1 or claim 2 wherein x has a value of 0.5 to 3.5, y has a value of 0.5 to 3.5 and z has a value of 0.5 to 3.5.

3. A composition according to any one of the preceding claims wherein R^1, R^2 and R^3 are independently H or methyl and R^4 is optionally substituted aryl.

4. A composition according to any one of the preceding claims wherein R^4 is phenyl bearing at least one sulfo, carboxy or phosphato substituent and having further optional substituents.

5. A composition according to any one of the preceding claims wherein R^4 is phenyl bearing a single sulfo substituent.

6. A composition according to any one of claims 1 to 3 wherein R^1 and R^2 independently are H or methyl and R^3 and R^4 together with the nitrogen atom to which they are attached represent an optionally substituted 3 to 8 membered aliphatic or aromatic ring.

7. A composition according to any one of claims 1 to 3 wherein R^1 and R^2 independently are H or methyl, R^3 is H or optionally substituted C_{1-8}alkyl and R^4 is optionally substituted C_{1-8}alkyl.

8. A composition according to claim 7 wherein R^1 and R^2 are H, R^3 is H or C_{1-4}alkyl bearing at least one acid substituent selected from the group consisting of $-SO_3H$, -COOH or $-PO_3H_2$ and R^4 is C_{1-4}alkyl bearing at least one acid substituent selected from the group consisting of $-SO_3H$, -COOH or $-PO_3H_2$.

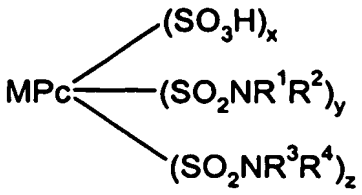
9. A composition according to any one of the preceding claims wherein at least 70% by weight of the total amount of phthalocyanine dye is of Formula (1).

10. A composition according to claim 9 wherein at least 90% by weight of the total amount of phthalocyanine dye is of Formula (1).

11. A composition according to any one of the preceding claims wherein the dyes of Formula(1) are free from fibre reactive groups.

12. A composition according to any one of the preceding claims which is an ink suitable for use in an ink-jet printer.

13. A mixture of dyes of Formula (4) and salts thereof:

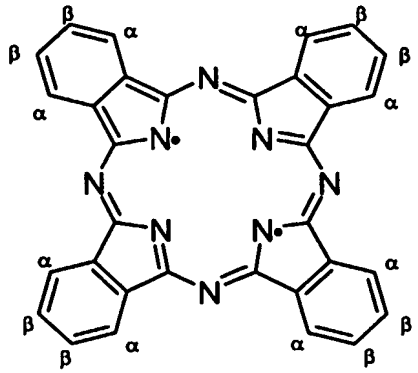


Formula (4)

wherein:

M is Cu or Ni;

Pc represents a phthalocyanine nucleus of formula;



R^1 and R^2 independently are H or optionally substituted C_{1-4}alkyl;

R^3 is H or optionally substituted C_{1-8}alkyl;

R^4 is optionally substituted C_{1-8}alkyl or phenyl bearing at least one sulfo, carboxy or phosphato substituent and having further optional substituents other than amino or substituted amino; or

R^3 and R^4 together with the nitrogen atom to which they are attached represent an optionally substituted 5- or 6-membered aliphatic or aromatic ring;

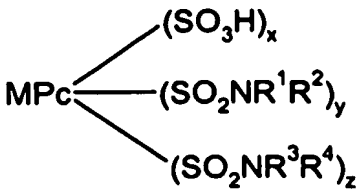
x is 0.1 to 3.8;

y is 0.1 to 3.8;

z is 0.1 to 3.8;

the sum of (x+y+z) is 4; and the substituents, represented by x, y and z, are attached only to a β-position on the phthalocyanine ring.

14. A mixture of dyes according to claim 13 of Formula (2) and salts thereof:

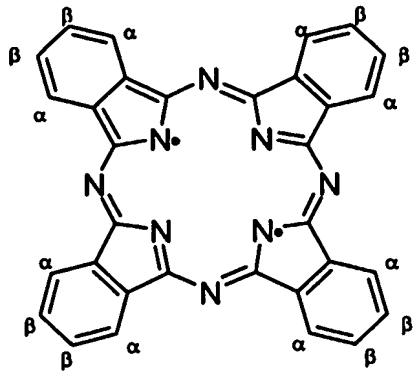


Formula (2)

wherein:

M is Cu;

Pc represents a phthalocyanine nucleus of formula;



R^1, R^2 and R^3 independently are H or methyl;

R^4 is phenyl bearing at least one sulfo, carboxy or phosphato substituent and having further optional substituents other than amino or substituted amino;

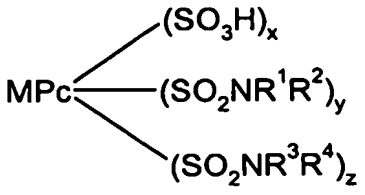
x is 0.5 to 3.5;

y is 0.5 to 3.5;

z is 0.5 to 3.5;

the sum of (x+y+z) is 4; and the substituents, represented by x, y and z, are attached only to a β-position on the phthalocyanine ring.

15. A mixture of dyes according to claim 13 of Formula (3) and salts thereof:

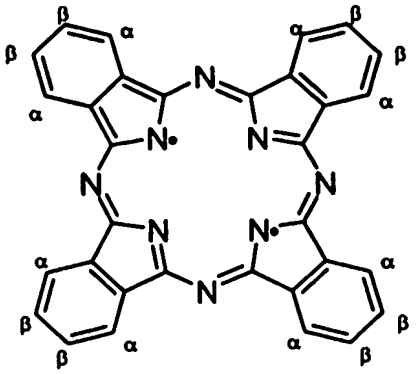


Formula (3)

wherein:

M is Cu;

Pc represents a phthalocyanine nucleus of formula;



R^1 and R^2 independently are H or methyl;

R^3 and R^4 independently are C_{1-4}alkyl bearing at least one acid substituent, selected from the group consisting of $-SO_3H$, -COOH or $-PO_3H_2$;

x is 0.5 to 3.5;

y is 0.5 to 3.5;

z is 0.5 to 3.5;

the sum of (x+y+z) is 4; and the substituents, represented by x, y and z, are attached only to a β-position on the phthalocyanine ring.

16. A mixture of dyes according to claim 13 wherein R^1 and R^2 independently are H or methyl and R^3 and R^4 together with the nitrogen atom to which they are attached represent an optionally substituted 3 to 8 membered aliphatic or aromatic ring.

17. A mixture of dyes according to any one of claims 13 to 16 free from fibre reactive groups.

18. A composition which comprises which comprises a major dye component which is a mixture of phthalocyanine dyes of Formula (4), as defined in any one of claims 13 to 17, and water.

19. A process for forming an image on a substrate comprising applying a composition according to claim 12 thereto by means of an ink-jet printer.

20. A material printed with a composition according to any one of claims 1 to 12 or 18 or a dye according to any one of claims 13 to 17.

21. A material according to claim 20 which is a photograph printed using a process according to claim 19.

22. An ink-jet printer cartridge comprising a chamber and an ink wherein the ink is in the chamber and the ink is according to claim 12.